Monthly Review

Federal Reserve Bank of Boston

Artist's sketch of an industrial center which is being developed by Cabot, Cabot, and Forbes, Inc., in Needham, Mass.

Planned Industrial Centers

Planned industrial centers have sprung into prominence since the close of World War II as the industrial equivalent of the restricted private residential development. The comprehensive planning and facilities provided by such centers represents an important new approach to industrial development and offers many advantages to industry, as well as to the areas in which they are located.

At least 12 planned industrial centers have come into existence in or near New England cities during the last eight years.[1] They run the range from the redevelopment of vacant shipyards to entirely new construction on previously vacant land. Sponsorship has been by private real estate developers, by manufacturers and distributors, and by civic groups.

This article discusses the nature of planned industrial centers, their operations, and their advantages. It also describes briefly the New England centers. Further details on leading developments of this type in the region will be presented in subsequent articles.

PLANNED INDUSTRIAL CENTERS have been riding the crest of the record postwar wave of new plant construction. Many expanding concerns have decentralized their operations. The industrial dispersal program of the Federal Government has intensified the trend. In this atmosphere of industrial change, planned industrial centers have flourished by providing one-package answers to a multitude of new-plant problems.

It is not just new concerns or firms building branch plants that have wanted larger sites for new plants. Many other manufacturers and distributors have been moving out of crowded quarters in obsolete, inefficient buildings. Traffic tie-ups in downtown areas have also emphasized the advantages of building in uncongested areas. Business concerns are increasingly recognizing that travel time is frequently more important than travel distance.

Industrialists are also becoming more concerned about the appearance of their buildings. Many are no longer content to operate in whatever space may be available. They want well-landscaped, attractive buildings set in pleasant surroundings with plenty of light and air. The increased number of plants of this nature has stimulated the interest of manufacturers and distributors. Modern, functionally designed plants, in addition to being pleasing to look at, have many other advantages. They make for superior working conditions and tend to lead to greater worker productivity and lower unit costs. They improve contacts with customers and advertise the company's product. Industrialists are also recognizing the value of attractive, restricted, well-laid-out neighborhoods. They do not want to locate in run-down districts or in areas that might degenerate.

Higher labor costs and modern production and warehousing techniques have created a growing demand for one-story buildings for most efficient operations. The increased use of single-story buildings has led to a need for larger tracts of land to accommodate plants. In addition to more space for the plant itself, manufacturers and distributors require more space for parking areas and off-street loading docks. They often want additional land for possible future expansion. While the need for more industrial land has developed, suitable land in the central areas of cities has become increasingly scarce. The price of land in built-up sections has risen. Moreover, real estate taxes in many cities are higher than those in their outlying areas.

Many communities have industry-zoned areas where some development planning has been done. But only a few have extensive industrial areas which were thoroughly planned, graded, and improved with roads and utilities before being offered to industrial concerns. Such

[1] The U. S. Department of Commerce is making a national study of planned industrial centers which will be published this spring.

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areas are known by various terms, such as planned industrial centers, industrial parks, and organized industrial districts.

A planned industrial center may be defined as an area developed and parceled according to a comprehensive plan with various facilities such as roads, railroad spurs, water, and power lines already installed before it is made available to a number of concerns as a location for their plants. It is a planned group of light manufacturing and distributing firms in one area. It may be considered as the industrial equivalent of the restricted private residential development.

The developers of an industrial center maintain close control over practically all phases of the use of the land. They provide for orderly and attractive growth, minimize congestion, and aim to increase the value of the property. Sometimes the industrial districts supply architectural, engineering, and construction services for concerns locating in the district and supervise all the details involved in building a plant. The developers may even arrange for financing new plants.

New England Industrial Centers

While some planned industrial centers were established many years ago, interest in them has increased greatly since 1945. At least 12 planned industrial centers have been established in New England since 1945. The Newton Industrial Center, the Cambridge Parkway Development, the New England Industrial Center in Needham, the Natick Industrial Park, and the Hingham Management Corporation provide sites and buildings for manufacturers and distributors at strategic locations near Boston. In the Portland area there are three planned industrial centers: Industries, Inc., Thompson's Point, and the shipyard redeveloped by the Greater Portland Public Development Commission. Harborside Industrial Park and the Warwick Industrial Park offer planned industrial developments just outside Providence, Rhode Island. Large planned industrial districts have also been established in Lowell, Massachusetts, and Bangor, Maine.

In New England, industrial districts have been organized to provide sites and plants in or near certain of the larger cities. Industrial centers have generally not been needed in smaller communities where suitable land is generally more plentiful and where less extensive development is more appropriate. In many of the smaller communities, local citizens have formed industrial foundations to help finance the sites and buildings for one or a small number of concerns.[2]

Two types of industrial districts have appeared in New England. One group has started with raw land. Examples are the Newton Industrial Center and the Warwick Industrial Park. They have graded the land, subdivided it into planned parcels, and installed various utilities before offering sites to manufacturers.

Other industrial districts have utilized existing but idle facilities. The Greater Portland Public Development Commission, Harborside Industrial Park, and the Hingham Management Corporation use shipyards that the government developed during the war. This type of district has had buildings in a variety of sizes available for occupancy, as well as the necessary utilities.

Sponsors

Three classes of sponsoring groups have developed the industrial centers in New England. Private real estate developers, recognizing current trends in industrial location, have formed most of them. Groups of public-spirited local citizens established the Greater Portland Public Development Commission and the Lowell Industrial Park. Their major objective was to provide for the growth of industrial employment in their areas, rather than to profit directly from the development.

Individual manufacturing and distributing concerns, or groups of concerns, formed the Bangor, Thompson's Point, and Warwick industrial centers. In these cases, the firms wanted new sites for their own operations. To obtain the desired locations and to provide for orderly development of the neighborhoods, they acquired more land than was needed for their own plants. The companies then established industrial parks to handle the extra land. The fact that manufacturers and distributors themselves have established three industrial centers in New England indicates that real estate developers and other groups have not met the fast-growing need for locations in planned industrial areas.

While railroads and chambers of commerce have often organized industrial districts in other parts of the country, they have not taken direct responsibility for any of the New England projects. They cooperated, however, in the development of centers sponsored by other groups. In Portland, for instance, Industries, Inc., is an outgrowth of ideas developed in the Chamber of Commerce. Since the chamber could not engage in the real estate business itself, the interested group formed a separate real estate corporation to purchase and develop the area. Chambers of commerce and railroads have helped industrial districts to find clients and induce them to locate in the districts. The railroads have been of further assistance in furnishing engineering advice, making soil tests, and providing for railroad services to the districts.

Operations

Because private investors have formed most of the New England industrial centers and are naturally aiming for profits from their activities, those that have developed raw land and built new plants have dealt largely or exclusively with established, well-rated concerns. They have not been able to take the risks involved in building plants on a lease basis for new concerns or concerns without high credit ratings.

Since the main problem of the groups that acquired vacant buildings was to fill their floor space as quickly as possible, they have been able to offer buildings to new concerns and to smaller businesses. But these districts have also been careful to select tenant concerns that appear to be economically sound and suited to the area. While the groups that have taken over existing buildings can offer attractive rentals, they reject fly-by-night concerns looking for concessions.

Successful development of planned industrial centers usually requires substantial amounts of capital. The cost of land represents only a small part of the total costs of development. Grading and drainage, roads,

[2]For a discussion of the scope and results of these programs, see "New England Industrial Development Corporations," *Monthly Review*, June 1952.

railroad spurs, water and sewage systems, and other utilities generally cost many times the initial investment in land. Individual investors or groups of individuals usually furnish the equity capital to purchase the land and finance basic facilities.

When the land has been improved, institutional sources of funds become available to finance the construction of modern buildings. Insurance companies, savings banks, commercial banks, endowment funds of universities, charitable trusts, and other types of institutions supply large amounts of mortgage money. In some instances, institutions or individuals completely finance buildings located in suitable areas for highly rated concerns that want to rent on long-term leases.

Since most of the industrial centers cover large tracts of land, they are usually developed by sections. While the developers may initially divide the entire tract into parcels to provide for the best possible use of the land, they must remain flexible. Piecemeal development allows for reparceling, if necessary, to meet the needs of future clients. Some districts initially hold back their most valuable parcels.

Industrial districts are long-term undertakings. It usually requires many years to build up the whole area. The developers generally are content to operate without profits for several years, plowing most of their revenue back into developing the district.

Selling their services and the use of their area is one of the main problems of industrial centers. They have used various devices to find prospects, including direct mailings, advertisements in newspapers and magazines, and brochures. But personal contacts seem to have been the most successful source of clients.

Advantages to Industrial Concerns

Many concerns that need additional facilities do not know precisely what they want. More often than not, they do not know how to handle the whole problem of selecting a location. Large national companies usually have their own engineers, architects, and location experts to investigate sites, buildings, utilities, and all other problems connected with a new location. Smaller concerns do not have these specialists. They generally are not able to devote the time necessary to make thorough investigations and do all the detailed jobs connected with constructing a new building. They frequently are unaware of how to arrange financing.

Planned industrial centers have replaced the uncertainties with well-thought-out plans. They eliminate many of the delays and problems involved in finding and acquiring sites, installing the necessary utilities, and designing and building a plant. Industrial districts are generally strategically located on or near major highways and railroads. All needed utilities are already available or arrangements have been made for installing them quickly. In some districts plants are available for lease or purchase. In others, architects, engineers and contractors are on call for designing and building new plants. Financial arrangements are generally flexible enough to meet almost any situation.

In the past few years, many firms have found it very difficult to raise money to build plants. Industrial districts help solve this problem by providing space on a rental basis. In addition, many concerns that are financially able to build their own plants prefer to lease them in order to conserve funds for new equipment and additional working capital. Leasing arrangements may also lead to tax advantages for the tenant.

Some industrial centers have cafeterias and provide heat and process steam. These centralized facilities reduce costs for tenant concerns. Some even furnish watchman and janitor services, and have their own fire-fighting force.

In addition to solving the immediate problems of concerns wanting new buildings, industrial centers aim to preserve or increase the value of the neighborhood. They do not admit firms that produce objectionable odors or noises. They generally establish restrictions on the type of buildings that can be constructed and require that plants be built an adequate distance from streets and from other buildings. They also provide for the establishment of ample parking areas, off-street loading docks, and for attractive landscaping. In the long run such restrictions benefit the concerns located in the district and protect their investments by providing for orderly growth of the area.

Advantages to the Community

Planned industrial centers provide advantages to the communities where they are situated, as well as to the concerns that locate in them. They place industrial concerns in a large, carefully planned area which minimizes adverse effects on residential neighborhoods. The restrictions which most industrial districts place on the use of their property attract firms that are free of objectionable features such as smoke, vibration, or noxious wastes.

The concentration of several concerns in one area leads to a reduction in municipal costs of extending water and sewer lines and other utilities to the individual firms. Industrial parks also help ease the traffic problems of downtown areas.

Planned industrial centers encourage the establishment of additional jobs, which benefits the entire community. Professional people, merchants and workers in service trades all depend heavily on a healthy base of manufacturing activity. New concerns also broaden the tax base and help to increase or maintain the value of existing property.

A shortage of suitable industrial sites and buildings has hampered the growth of many New England communities. Manufacturers often find it difficult or expensive to assemble the parcels of land they want. A community that has an industrial park already established, with suitable sites available and with men who will assume the problems of planning, constructing, and financing a building, is in a favored position when competing with other communities.

Planned industrial centers help to stabilize employment in the communities where they are established by attracting a diversified group of concerns. Companies that need large tracts of land for a single plant usually find it advantageous to buy and develop it themselves. As a result, most of the concerns that have located in industrial districts have been small or medium-sized firms or medium-sized branches of large concerns. Usually employment fluctuations of several different companies are at least partially offsetting.

Monthly Review
FEDERAL RESERVE BANK OF BOSTON

INDUSTRIAL OPPORTUNITIES IN NEW ENGLAND:

Fiberglas and Reinforced Plastics

THE FIRST FIBERGLAS was produced by the Owens-Illinois Glass Corporation in 1931. Since that time the industry has had a phenomenal growth, largely due to research and promotion by that firm and its offspring, the Owens-Corning Fiberglas Corporation. At present, Owens-Corning supplies the majority of the country's needs for fiberglas, which are valued at approximately $130 million annually. The demand for fiberglas is expected to double in the next eight to ten years as its potentialities are more widely recognized.

Fiberglas is produced by spinning molten glass into strands of various lengths and diameters. It is not yet known how finely this glass may be drawn, but fibers have been spun which are close to the resolving limit of an electron microscope. For most practical uses, the fibers are spun to diameters of four to ten thousandths of a millimeter.

There are three principal types of glass fibers: bulk wool, continuous filament, and staple fiber. Bulk wool is formed by use of steam jets, which draw streams of molten glass rapidly into fiber form. The bulk of glass fiber is made in this form. It is used mostly for thermal insulation and, to a lesser extent, for air filtration.

Continuous filament fiber is drawn mechanically from electrically heated spinnerettes. In some plants the fiber is spun from small furnaces to which glass is fed in the form of marbles. In others, the glass flows directly to the spinning orifices from the tank in which it is made. The spinnerettes force the molten glass into fine fibers which are pulled into long filaments. These can then be processed into yarns, cords, and fabrics by conventional textile machinery.

Staple fibers are spun from molten glass by using high velocity steam or air. This method produces fibers from a few inches to a foot long. The fibers are gathered on a revolving drum or conveyor, after which they are twisted and piled into yarns of various sizes and processed by standard machinery for long-staple products.

The principal qualities of fiberglas, which make it capable of a wide variety of application, are its strength, light weight, and dimensional stability, as well as its outstanding resistance to moisture, mildew, high temperatures, sunlight, and chemicals.

On an equal weight basis, fiberglas is three times as strong as stainless steel and almost seven times as strong as aluminum. A cubic foot of bulk glass may weigh one hundred times as much as the same volume of bulk fiberglas.

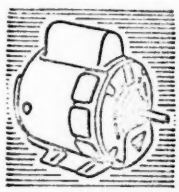
The dimensional stability of fiberglas is excellent. Fiberglas does not absorb moisture, and it is unaffected by cycles of normal heat, cold, dryness, and dampness. At maximum stress, the fibers show only a three per cent stretch and return to their normal length when the tension is relaxed.

Sunlight, mildew and odors do not attack fiberglas. This material is also impervious to all chemicals except hydrofluoric acid, hot phosphoric acid, fluoride salts, and strong alkalis. Moreover, the strength of fiberglas is unaffected by temperatures up to 600°F. It begins to soften at 1500°F., but it will not burn.

The major qualities preventing its use in some specific applications are its inelasticity and the tendency of clean fibers to rupture if rubbed against each other. Special lubricating agents are used to protect fibers from abrasion damage.

This article is the seventh in a series of abstracts from the Arthur D. Little, Inc., study of Industrial Opportunities in New England. A reproduction of the complete study may be obtained for $2.00 on request to the Research and Statistics Department, Federal Reserve Bank of Boston, 30 Pearl Street, Boston 6, Massachusetts.

Uses of Fiberglas



The electrical industry was the first to use glass fibers. Great strength and resistance to moisture, rot, chemicals, and high temperatures make fiberglas an important carrying medium and reinforcement for impregnants used for insulation in electrical equipment. Because motors wound with glass-insulated wire can be operated at higher temperatures, an important saving in weight results. Layers of glass cloth, laminated with various resins, provide sheets and boards with exceptional resistance to abnormal physical and electrical stress. Fiberglas yarns are also braided over wire and cable or combined with other fibers, such as asbestos, to provide insulation with specific properties.

One of the most recent improvements has been the development of a glass-fiber paper made entirely out of superfine glass fibers. This paper is expected to be extremely useful as a base for electrical insulating sheet or tape, and it is ideal for air-cooled transformers and absolute air filters.

Glass fabrics, because of their superior reinforcing properties, are coated with rubber or resins for use as automobile convertible-top material, railroad window shades, upholstery fabrics, marine and aircraft floor and wall coverings, flexible hot air ducts, and gaskets. These coated glass fabrics have high tear strength and dimensional stability, as well as resistance to rot, mildew, chemicals, and burning.

Fabrics for decorative use are made from glass fibers after "coronizing." In this process, the fabrics are subjected to a temperature of 1100°F., burning off the textile lubricant and giving a permanently relaxing crimp.

Both curtains and draperies can be made of the glass fabrics. Color-fast patterns result from screen painting

over a latex binder. Drapes can be washed and rehung in less than seven minutes and need no ironing or stretching. Consumer acceptance of fiberglas fabrics has been excellent, and this market is expected to expand greatly within the next ten years.

New England has only one glass-fiber producer, the Owens-Corning Fiberglas Corporation at Ashton, Rhode Island. This plant produces fiberglas yarn and staple fiber. About one-half of the total production in this plant is used in New England. The primary user of this fiber is the electrical industry, principally for wire covering and multiple cable ties. Other users of the Ashton plant's products are the textile industry, the reinforced paper industry, and the rubber industry, which uses fiberglas in tires and industrial belting.

The outlook for the growth of fiberglas fabrication in New England is good, particularly in textile manufacture. About two million yards of fiberglas marquisette curtain fabrics were produced in 1951, and it is estimated that 10 million yards will be produced in 1952. Some New England textile manufacturers such as the Russell Manufacturing Company of Middletown, Connecticut, and the Thayer Manufacturing Company of Norwich, Connecticut, are already in the field. Other companies not now in the fiberglas field should also be able to take advantage of this large expansion.

An even larger potential, however, exists in decorative drapery fabrics. It is expected that an annual production of 30 million yards will be reached during the next decade. The initial experimentation and machine development for roller printing of fiberglas fabrics is being conducted in New England. This factor alone should give New England an excellent basic position in the production of decorative materials.

As the price of fiberglas is lowered, a number of new fields will be opened, including industrial fabrics. A few such materials are now selling for 15 cents a yard, and as the price of others decreases, applications will increase rapidly. The use of fiberglas binder and baler twine will be another large field opened by substantially decreased prices.

Reinforced Plastics

The reinforced plastics industry is based on the availability of glass fibers, which impart great strength to the end product. The industry was born during World War II, when a new type of thermosetting resin called a polyester was introduced. During the war, all polyester resins and glass fibers were allocated for military purposes. A notable opportunity was thus provided for the fabricators to learn to handle this new material at government expense.

There are now approximately fourteen United States producers of polyester resins, and there are six producers of glass fibers suitable for use by the reinforced plastics industry. The 1951 production of reinforced plastic parts was an estimated 35 million pounds, of which 22 million were for civilian use and 13 million pounds were for military applications.

A great deal of research has been directed toward finding proper resins to bind together the glass fibers. Most of the work has centered around the use of the polyester-type resins. The problem associated with the proper choice of resins appears to be centered around the idiosyncrasies of glass fibers. Glass fibers have great strength in tension but have little strength if the surface has been injured, such as by rubbing one fiber against another. In addition, glass fibers are difficult to wet properly. Much research has been applied toward finding resins which wet glass fibers well and which will cure at low pressures.

Initially, glass-reinforced plastic parts were made by saturating woven glass fabric with resin and forming it around a male mold before it hardened. Much glass fabric is still used, especially for large forms with compound curves and where the utmost in strength is desired. There is, however, a strong tendency to substitute cheaper rovings and mats for glass fabric. Glass fabric may cost $2.00 a pound or more, while roving and mat cost about 40 to 60 cents a pound.

Other fibers are also used as reinforcing fillers for plastics, including paper, asbestos, cotton linters, chopped cotton cord, sisal, and occasionally synthetic fibers such as nylon. The use of any of these is a compromise between the cost and strength desired. In many instances it has been found that glass fillers can provide more strength for a given cost than any of the other common fibers.

Reinforced plastics came into being as metal substitutes, and metals still offer their chief competition. These materials offer two distinct advantages over metals, — their greatly superior corrosion resistance and their greater strength for equivalent weights.

Conclusions

The excellent growth of the fiberglas industry seems likely to continue in the future. Although New England at present has only one glass-fiber-producing plant, there are presently a number of consuming industries in the region. The New England market absorbs half of the local plant's production, and it also consumes bulk fibers produced in other areas.

New England's background in textile production and its strategic position in certain aspects of textile printing should enable it to obtain a foremost position in the production of decorative fiberglas fabrics. Specialized industrial fabrics should also be a suitable product for New England weavers.

The probable downward trend in prices, together with the outstanding physical and chemical characteristics of fiberglas, makes this material of unusual interest to New England industry in non-textile applications. Since it is a basically new material, its fabrication into useful end products is dependent on ingenuity, technological skill, inventiveness, and skilled labor — all New England assets. Such developments as fiberglas polyester-resin molded objects, new types of filters, and similar products offer opportunities for progressive New England manufacturers.

New England can, in fact, take advantage of many new production opportunities offered by the growing use of fiberglas. These new uses may require a great deal of development work, patience, and ingenuity before they reach large-scale production, but they can contribute substantially to growth in the region.

Monthly Review
FEDERAL RESERVE BANK OF BOSTON

Earnings and Expenses, N. E. Member Banks — 1952

DEPOSITS AND EARNING ASSETS of New England member banks continued to expand during 1952. Net profits after all charges but before payment of dividends amounted to $37.5 million, about nine per cent higher than in 1951. The country banks reported an increase of ten per cent in net profits compared with 7.7 per cent for Boston banks. The increases were generally distributed within both groups of banks.

The volume of loans, checks, and other banking transactions rose to new peaks as business continued at high levels. Increases in expenses were more than covered by larger operating earnings. Net losses in nonoperating income were reduced and although taxes were heavier, the average bank experienced a modest rise in net profits. Net profits on an annual basis were 6.2 per cent of capital accounts — one of the best rates of return in the postwar period.

Total operating earnings reached $212 million, about 11 per cent higher than last year's. All sources of earnings were higher. Interest on loans again represented the major part of the increase, and this source of income comprised a larger proportion (53 per cent) of total earnings. The outstanding volume of loans was larger, and by the year-end the typical loan was negotiated at an interest rate ¼ per cent higher than a year ago.

Returns on U. S. security holdings improved, largely because of higher rates. The rise in rates over the year more than offset the small decline in total volume of holdings. The average maturities of holdings remained about the same. Interest on other investments, principally state and municipal securities, showed sizable gains but continued to represent a small proportion of total earnings. Income from other operations and services increased moderately.

Current operating expenses amounted to $131 million, higher by ten per cent than in 1951. Over half of the increase in expenses during 1952 was in wage and salary payments, which constituted about 50 per cent of total expenses. Interest paid on time deposits was again somewhat higher at country banks. The increase resulted from larger savings deposit balances, but more significantly from higher rates of interest paid as competition for savings balances increased. Most other categories of expense were substantially unchanged or showed small increases. One of the few expenses to decline was the assessment for deposit insurance.

Net current earnings rose to $78 million, up about 13 per cent for the year. For the first time in several years, however, expenses increased almost as fast as total operating earnings, leaving the ratio of net current earnings to total earnings practically unchanged at 36 per cent.

Net losses or charge-offs on loans were confined to a small group of banks and were negligible in relation to the record loan volume outstanding. Aggregate losses or write-downs on securities plus transfers to reserves on account of loans continued to exceed profits on securities or recoveries on loans, but the net was lower in amount than last year. This decline indicates that a number of banks have reached the maximum permitted under Treasury rulings for reserves for bad debts. Net current earnings were thus reduced less than last year, and profits before taxes amounted to $67 million, an improvement of 19 per cent over results in 1951.

Taxes on net income were again considerably higher at most banks, but the percentage increase was about the same as in 1951. Taxes amounted to $29 million and reflected the higher volume of taxable income, the higher normal and surtax rates and, for a few banks, the excess profits tax. The ratio of net profits to net current earnings reached 48 per cent, a slight improvement over results in 1951.

The increase in capital accounts during 1952, largely through retention of earnings, paced the increase in deposit growth and customer loan requirements. About $16 million of earnings were retained to strengthen capital accounts — nine per cent more than last year. Cash dividends paid were conservative and represented a payment of about 3.5 per cent on total capital.

MEMBER BANK EARNINGS, EXPENSES, AND PROFITS
(Amounts in Thousands of Dollars)

	Boston		Other First District Banks	
	Year 1952	% Change from Year Ago	Year 1952	% Change from Year Ago
Earnings:	**$73,802**	**+ 8.6**	**$138,466**	**+12.8**
Interest received on bonds and stocks..	17,646	+15.0	38,467	+11.0
Interest received on loans and discounts	38,340	+ 9.7	73,234	+15.3
Service charges on deposits.....	2,170	+ 2.1	9,031	− .3
Trust department....	7,999	+ 6.7	8,470	+15.0
All other income....	7,647	− 5.0	9,264	+14.2
Expenses:	**$42,220**	**+ 8.1**	**$ 92,138**	**+11.7**
Salaries and wages.	23,356	+ 9.0	45,761	+12.7
Interest paid on time deposits.....	1,633	+ 2.4	13,361	+15.1
All other expenses ..	17,231	+ 7.5	33,016	+ 9.0
Net Current Earnings..	**$31,582**	**+ 9.3**	**$ 46,328**	**+15.3**
Net losses.....	3,690	−34.3	7,347	+ 3.4
Profits before income taxes.....	$27,892	+19.8	$ 38,981	+17.8
Taxes on net income...	13,120	+37.2	16,230	+30.5
Net Profits.....	**$14,772**	**+ 7.7**	**$ 22,751**	**+10.2**
Cash dividends declared on common stock.....	$ 9,659	+11.8	$ 11,606	+ 7.6

Factors Affecting Earnings

Commercial Loans — Credit requirements of district banks' business customers generally reflected the prevailing national pattern. As in other years, most of the loans went to finance the production or marketing of goods and the expansion of industrial capacity. Financing of defense production was important but less so than in 1950 or 1951. As 1952 ended, the total business loan volume of district banks was nine per cent above its level at the end of 1951.

Loan volume remained fairly stable during most of the year and did not experience the usual seasonal downturn during the first half. The rise in loans was pronounced in the last quarter but contained a large concentration of borrowing which is typically seasonal. Most of these credits went to trade, commodity dealers, and food and tobacco processors. Public utilities and

sales finance companies also increased their loans.

Rates on business loans averaged higher during the year. Rates firmed during the first three-quarters of the year and leveled off in December. On December 15 the average rate in Boston was 3.51 per cent, compared with 3.16 per cent a year ago. Although the "prime rate" continued at three per cent, banks were more selective in granting loans and a larger number of customers paid more.

Real Estate Loans — During 1952 residential building and other construction activity were well maintained. Real estate loans at district banks reached $582 million. Although the volume of commercial bank real estate mortgage debt reached new levels, a higher volume of repayments held expansion to $60 million, an amount close to that last year.

Consumer Loans — All classes of consumer loans showed sharp increases during the year. The increase was particularly rapid after the end of Regulation W in May. Some lengthening of maturities and lowering of down payments occurred as merchants competed in stimulating sales. The most significant increase occurred in automobile sale credit, up 35 per cent to $120 million.

Investments — Average holdings of total investments were slightly higher during most of 1952, although no change was shown on the year-end statements. In many instances, banks were able to maintain or increase investment positions and at the same time to expand loans. In part, access to Federal Reserve credit through discounts made this possible. Pressures on reserves to meet loan accommodations toward the end of the year forced many banks to sell short- and intermediate-term U. S. securities. Some of these, purchased during previous years when rates were lower, were sold at a loss. Some losses were also registered in connection with changes made in security portfolios in order to obtain higher yields and the advantages of certain tax benefits. Bank demands for municipal and state obligations continued to reflect the increased value and attractiveness of these tax-exempt issues. District banks increased holdings of state and municipal securities ten per cent. Investments represented about 53 per cent of total earning assets in 1952 compared with about 56 per cent in 1951. The decline in proportion, however, was caused by the increase in total loans.

MEMBER BANK STATEMENT OF CONDITION
(Amounts in Thousands of Dollars)

	Boston		Other First District Banks	
	Dec. 31, 1952	% Change from Dec. 31, 1951	Dec. 31, 1952	% Change from Dec. 31, 1951
Total Assets	$2,757,711	− .2	$4,816,101	+ 3.3
Total reserves, cash and balances	**$ 665,776**	**− 9.1**	**1,055,137**	**− 6.0**
Total investments	**$ 923,167**	**− 5.1**	**2,133,939**	**+ 3.0**
U. S. securities	780,988	− 8.8	1,757,842	+ 2.3
Other securities	142,179	+22.0	376,097	+ 6.0
Total loans and discounts	**$1,103,133**	**+10.5**	**$1,561,053**	**+11.3**
Commercial and industrial loans	772,906	+ 8.3	611,639	+ 8.8
Real estate loans	109,842	+28.7	471,875	+ 9.0
Other loans to individuals	159,168	+10.2	420,150	+17.7
All other loans	83,603	+13.3	81,687	+10.7
Reserve for bad debt losses, etc.	− 22,386	+15.4	− 24,298	+ 7.5
All other assets	**$ 65,635**	**+ 8.5**	**$ 65,972**	**+ 3.4**
Total Liabilities and Capital Accounts	$2,757,711	− 2	$4,816,101	+ 3.3
Liabilities	**$2,513,283**	**− .4**	**4,456,293**	**+ 3.2**
Demand deposits	2,262,291	− .6	3,269,890	+ 3.5
Time deposits	186,170	+ 1.0	1,144,032	+ 2.5
All other liabilities	64,822	+ 2.0	42,371	+ 8.4
Capital Accounts	**$ 244,428**	**+ 2.2**	**$ 359,808**	**+ 3.9**

Money Market Developments

During 1952 money markets were generally tight and at times severely so. Money rates rose further. Private credit demands together with borrowing by state and local governments were somewhat larger than in 1951. In addition, the Federal Government was a substantial net borrower. These conditions affected the New England money market as in the nation.

Credit policy of the monetary authorities during 1952 was designed to be moderately restrictive. Progressive relaxation and final discontinuance during the year of consumer and real estate credit controls and the Voluntary Credit Restraint program, however, removed restraints which had helped retard credit demands during 1951. Consequently, more reliance was placed upon open market operations and the discount function as credit control devices. The freedom and flexibility which have developed in the government securities market since the Treasury-Federal Reserve accord in March 1951 made use of these instruments possible.

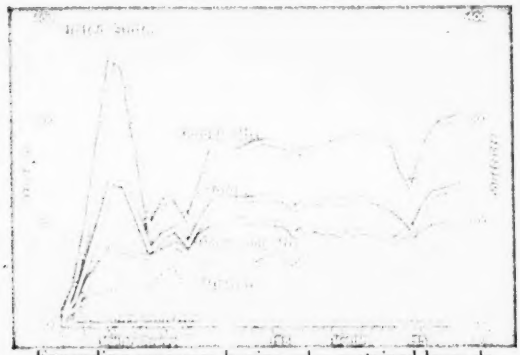
Federal Reserve operations during the year were designed to promote a condition in which access to Federal Reserve credit was primarily through discounting. Access to Federal Reserve credit through the U. S. securities market was limited as much as possible to supplying such additional funds as were necessary to avoid undue restraint. Under a policy of this kind, as loans increase and bank deposits expand, individual banks must obtain additional reserves either by borrowing from the Reserve banks at the discount rate or selling Treasury bills or other securities at interest rates determined in the market. Depending upon the excess reserve position of other banks, the member bank may also elect to borrow reserve funds through the "federal funds" market at a rate determined in this market. Banking reserves supplied through discounts and advances are much less likely to constitute a permanent base for credit expansion than funds released through security purchases. If the banks borrow they are under pressure to liquidate assets or curtail further expansion. Reflecting this policy, district member banks during the second half of the year borrowed substantial amounts of funds to adjust operating positions temporarily. Many of the large district banks were also active in the "federal funds" market during the year both as buyers and sellers within and outside the district.

General business activity was sustained throughout 1952 at high levels and although strongly concentrated in the capital goods industries at the outset was more evenly distributed at the year end. Business sentiment in January reflected a high degree of confidence, and present indications give assurance of a good level of business activity well into 1953.

Against this general background, in mid-January the Federal Reserve banks raised their rediscount rate from 1¾ per cent to 2 per cent. Observers interpreted this action as a realignment of the rediscount rate to conform more closely with the pattern of short-term yields that had developed in the money market as the restrictive open market policy of the System continued.

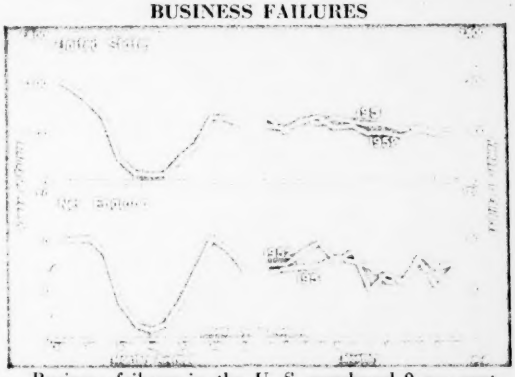
Business Conditions

INDUSTRIAL PRODUCTION



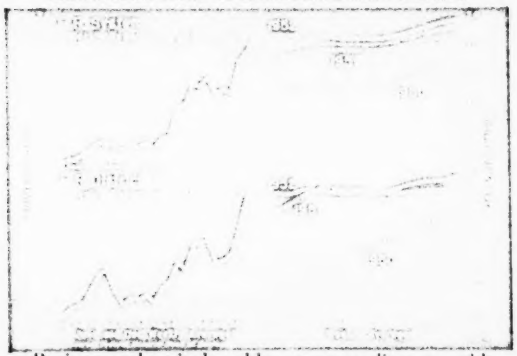
Expanding consumer buying, plus sustained large demands for construction materials and for military and producers' equipment, led to a marked increase in industrial production in late 1952. The Board's index reached 234 in Dec. 1952 and 235 in Jan. 1953.

BUSINESS FAILURES



Business failures in the U. S. numbered 9 per cent less in 1952 than in 1951, while in N. E. failures totaled 9 per cent more. During the third quarter of 1952 N. E. failures ran consistently higher than a year ago, and the trend apparently continued in Jan. 1953.

BUSINESS AND AGRICULTURAL LOANS

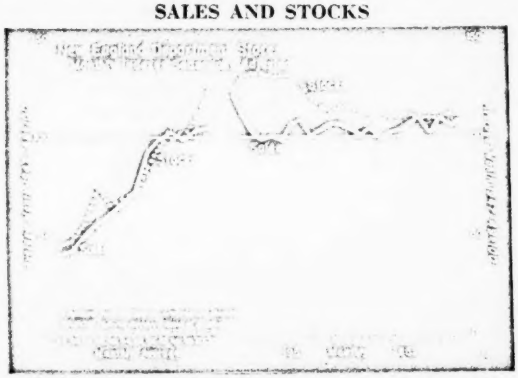


Business and agricultural loans outstanding at weekly reporting member banks in the nation averaged almost 10 per cent higher in 1952 than in 1951. In District I the average level was only 3 per cent higher in the year-to-year comparison.

CONSTRUCTION AWARDS IN NEW ENGLAND

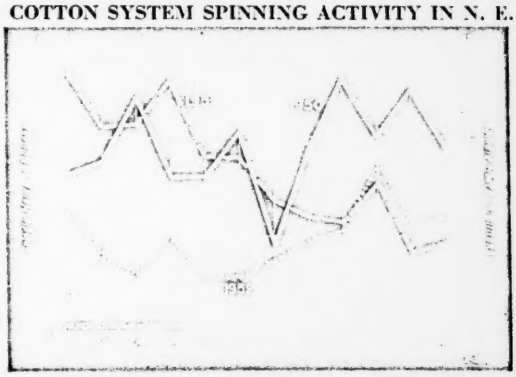
The value of total construction awards in N. E. during 1952 was slightly higher than in 1951, despite a drop of 67 per cent in Dec. below the year-ago level. Awards for manufacturing, institutional, and hospital buildings declined most sharply in Dec.

SALES AND STOCKS



Dollar sales at N. E. department stores during 1952 were about equal to sales in 1951. District stores continued to pare their inventories during 1952. The stocks index was 4 per cent lower in Dec. 1952 than a year ago, while the sales index was 2 per cent higher.

COTTON SYSTEM SPINNING ACTIVITY IN N. E.



Slow demand and cautious inventory policies during early 1952 held annual spindle hours of operation in N. E. cotton mills 26 per cent below the 1951 level. The cotton gray cloth market improved during the latter part of 1952, but was quiet in Jan. 1953.